

49321-16.ST25.txt SEQUENCE LISTING

<110> Clinton, Gail M. Evans, Adam Henner, William D. <120> HER-2 BINDING ANTAGONISTS <130> 49321-16 <140> US 09/506,079 <141> 2000-02-16 <160> 38 <170> PatentIn version 3.3 <210> <211> 79 <212> PRT <213> Homo sapiens <220> <221> MISC_FEATURE <222> (2)..(2)Applicants herein disclose Thr and Ser sequence variants at this <223> position <220> <221> MISC_FEATURE <222> (5)..(5)<223> Applicants herein disclose Leu and Pro sequence variants at this position <220> <221> MISC_FEATURE <222> (6)..(6) <223> Applicants herein disclose Pro and Leu sequence variants at this position <220> <221> MISC_FEATURE <222> (16)..(16)<223> Applicants herein disclose Leu and Gln sequence variants at this position <220> <221> MISC_FEATURE <222> (18)..(18)<223> Applicants herein disclose Met and Leu sequence variants at this position <220> <221> MISC_FEATURE <222> (21)..(21)<223> Applicants herein disclose Gly, Asp, Ala and Val sequence variants at this position

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Leu	Tyr 50	Gln	Gly	Cys	Gln	Val 55	Val	Gln	Gly	Asn	Leu 60	Glu	Leu	Thr	Tyr
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His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala Leu Val 260 265 270

Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro Glu Gly Arg 275 280 285

Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu 290 295 300

Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln 305 310 315 320

Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys 325 330 335

Pro Cys Ala Arg Gly Xaa His Ser Xaa Xaa Pro Arg Pro Ala Ala Val 340 345 350

Pro Val Pro Xaa Arg Xaa Gln Pro Xaa Pro Ala His Pro Val Leu Ser 355 360 365

Phe Leu Arg Pro Ser Trp Asp Xaa Val Ser Ala Phe Tyr Ser Leu Pro 370 375 380

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                                 25
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Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

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Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro

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Leu	Cys	Tyr	Gln	Asp 165	Thr	Ile	Leu	Trp	Lys 170	Asp	Ile	Phe	His	Lys 175	Asn
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- Gly Gly Lys Val Pro Ile Lys Trp Met Ala Leu Glu Ser Ile Leu Arg 885 890 895
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- Arg Glu Ile Pro Asp Leu Leu Glu Lys Gly Glu Arg Leu Pro Gln Pro 930 935 940
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- Asp Leu Gly Pro Ala Ser Pro Leu Asp Ser Thr Phe Tyr Arg Ser Leu 995 1000 1005
- Leu Glu Asp Asp Asp Met Gly Asp Leu Val Asp Ala Glu Glu Tyr 1010 1015 1020
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Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro Page 16

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Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys 180 185 190

His Pro Cys Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser 195 200 205

Ser Glu Asp Cys Gln Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys 210 225 220

Ala Arg Cys Lys Gly Pro Leu Pro Thr Asp Cys Cys His Glu Gln Cys 225 230 235 240

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Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln 305 310 315 320

Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys 325 330 335

Pro Cys Ala Arg Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val 340 345 350

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<213> Homo sapiens

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<211> 240

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<213> Homo sapiens

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Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 65 75	
<210> 20 <211> 79 <212> PRT <213> Homo sapiens	
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Gly Thr His Ser Xaa Pro Pro Arg Pro Ala Ala Val Pro Val Pro Leu 1 5 10 15 Page 19	

Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 30

Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 45

Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Pro 50 60

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<211> 79

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<221> MISC FEATURE

 $\langle 222 \rangle$ (6) ... (6)

<223> Applicants disclose Pro and Leu variants at this position

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Gly Thr His Ser Leu Xaa Pro Arg Pro Ala Ala Val Pro Val Pro Leu
1 5 10 15

Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 30

Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 45

Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Pro 50 55 60

Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 65 70 75

<210> 22

<211> 79

<212> PRT

<213> Homo sapiens

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<221> MISC FEATURE

<222> (16)..(16)

<223> Applicants disclose Leu and Gln variants at this position

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Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val Pro Val Pro Xaa 1 5 10 15

Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 30

Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 45

Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Pro
50 55 60

Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 65 70 75

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<221> MISC FEATURE

<222> (18)..(18)

<223> Applicants disclose Met and Leu variants at this position

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Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val Pro Val Pro Leu
1 5 10 15

Arg Xaa Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 30

Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 45

Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Pro 50 55 60

Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 65 70 75

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- <211> 79
- <212> PRT
- <213> Homo sapiens
- <220>
- <221> MISC_FEATURE
- <222> (21)..(21)
- <223> Applicants disclose Gly, Asp, Ala and Val variants at this position
- <400> 24
- Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val Pro Val Pro Leu
 1 5 10 15
- Arg Met Gln Pro Xaa Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 30
- Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 45
- Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Pro 50 55 60
- Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 65 70 75
- <210> 25
- <211> 79
- <212> PRT
- <213> Homo sapiens
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- <222> (36)...(36)
- <223> Applicants disclose Leu and Ile variants at this position
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- Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val Pro Val Pro Leu 1 5 10 15
- Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro
 20 25 30
- Ser Trp Asp Xaa Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 45
- Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Pro Page 22

Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 65 75	
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Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val Pro Val Pro Leu 1 5 10 15	
Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 30	
Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 45	
Ser Pro Thr Ser Val Xaa Ile Ser Pro Val Ser Val Gly Arg Gly Pro 50 55 60	
Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 75	
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Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val Pro Val Pro Leu 1 5 10 15	

Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 30

Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 40 Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Xaa 55 Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg Tyr Glu Gly 70 <210> 28 <211> 79 <212> PRT <213> Homo sapiens <220> <221> MISC_FEATURE <222> (73)..(73)<223> Applicants disclose Asp and Asn variants at this position <400> 28 Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val Pro Val Pro Leu 5 10 Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser Phe Leu Arg Pro 20 25 Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro Leu Ala Pro Leu 35 40 Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val Gly Arg Gly Pro 55 50 Asp Pro Asp Ala His Val Ala Val Xaa Leu Ser Arg Tyr Glu Gly 65 70 <210> 29 <211> 419 <212> PRT <213> Homo sapiens <220> <221> MISC FEATURE <222> (342)...(342)<223> Applicants disclose Thr and Ser variants at this position

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Leu	Arg	Leu 35	Pro	Ala	Ser	Pro	Glu 40	Thr	His	Leu	Asp	Met 45	Leu	Arg	His
Leu	Tyr 50	Gln	Gly	Cys	Gln	Val 55	Val	Gln	Gly	Asn	Leu 60	Glu	Leu	Thr	Tyr
Leu 65	Pro	Thr	Asn	Ala	Ser 70	Leu	Ser	Phe	Leu	Gln 75	Asp	Ile	Gln	Glu	Val 80
Gln	Gly	Tyr	Val	Leu 85	Ile	Ala	His	Asn	Gln 90	Val	Arg	Gln	Val	Pro 95	Leu
Gln	Arg	Leu	Arg 100	Ile	Val	Arg	Gly	Thr 105	Gln	Leu	Phe	Glu	Asp 110	Asn	Tyr
Ala	Leu	Ala 115	Val	Leu	Asp	Asn	Gly 120	Asp	Pro	Leu	Asn	Asn 125	Thr	Thr	Pro
Val	Thr 130	Gly	Ala	Ser	Pro	Gly 135	Gly	Leu	Arg	Glu	Leu 140	Gln	Leu	Arg	Ser
Leu 145	Thr	Glu	Ile	Leu	Lys 150	Gly	Gly	Val	Leu	Ile 155	Gln	Arg	Asn	Pro	Gln 160
Leu	Cys	Tyr	Gln	Asp 165	Thr	Ile	Leu	Trp	Lys 170	Asp	Ile	Phe	His	Lys 175	Asn
Asn	Gln	Leu	Ala 180	Leu	Thr	Leu	Ile	Asp 185	Thr	Asn	Arg	Ser	Arg 190	Ala	Cys
His	Pro	Cys 195	Ser	Pro	Met	Cys	Lys 200	Gly	Ser	Arg	Cys	Trp 205	Gly	Glu	Ser
Ser	Glu 210	Asp	Cys	Gln	Ser	Leu 215	Thr	Arg	Thr	Val	Cys 220	Ala	Gly	Gly	Cys
Ala 225	Arg	Cys	Lys	Gly	Pro 230	Leu	Pro	Thr		Cys 235 age		His	Glu	Gln	Cys 240

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1 5 10 15

Ala Ala Gly Cys Thr Gly Pro Lys His Ser Asp Cys Leu Ala Cys 245 250 255	Leu
His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala Leu 260 265 270	Val
Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro Glu Gly . 275 280 285	Arg
Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr : 290 295 300	Leu
Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn 305 310 315	Gln 320
Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser 335	Lys
Pro Cys Ala Arg Gly Xaa His Ser Leu Pro Pro Arg Pro Ala Ala '340 345 350	Val
Pro Val Pro Leu Arg Met Gln Pro Gly Pro Ala His Pro Val Leu 355 360 365	Ser
Phe Leu Arg Pro Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu 1 370 375 380	Pro
Leu Ala Pro Leu Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Va	Val 400
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Tyr Glu Gly	
<210> 30 <211> 419 <212> PRT <213> Homo sapiens	
<220> <221> MISC_FEATURE <222> (345)(345)	

<223> Applicant disclose Leu and Pro variants at this position <400> 30

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1 5 10 15

Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys
20 25 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 35 40 45

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro 115 120 125

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser 130 135 140

Leu Thr Glu Ile Leu Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln 145 150 155 160

Leu Cys Tyr Gln Asp Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn 165 170 175

Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys 180 185 190

His Pro Cys Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser 195 200 205

Ser Glu Asp Cys Gln Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys 210 215 220

Ala Arg Cy: 225	s Lys Gly	Pro Leu 230	Pro Thi	Asp Cy 23		His	Glu	Gln	Cys 240
Ala Ala Gl	Cys Thr 245		Lys His	s Ser As 250	sp Cys	Leu	Ala	Cys 255	Leu
His Phe Ası	His Ser 260	Gly Ile	Cys Glu 265		ls Cys	Pro	Ala 270	Leu	Val
Thr Tyr Ası 27	-	Thr Phe	Glu Sei 280	Met Pr	o Asn	Pro 285	Glu	Gly	Arg
Tyr Thr Phe	e Gly Ala	Ser Cys 295		Ala Cy	s Pro 300	Tyr	Asn	Tyr	Leu
Ser Thr Asp 305	Val Gly	Ser Cys 310	Thr Let	ı Val Cy 31		Leu	His	Asn	Gln 320
Glu Val Thi	Ala Glu 325	Asp Gly	Thr Glr	n Arg Cy 330	⁄s Glu	Lys	Cys	Ser 335	Lys
Pro Cys Ala	Arg Gly 340	Thr His	Ser Xaa 345		o Arg	Pro	Ala 350	Ala	Val
Pro Val Pro 355		Met Gln	Pro Gly 360	Pro Al	a His	Pro 365	Val	Leu	Ser
Phe Leu Arc	Pro Ser	Trp Asp 375	Leu Val	. Ser Al	a Phe 380	Tyr	Ser	Leu	Pro
Leu Ala Pro 385	Leu Ser	Pro Thr 390	Ser Val	Pro Il. 39		Pro	Val	Ser	Val 400
Gly Arg Gly	Pro Asp 405	Pro Asp	Ala His	Val Al 410	a Val	Asp	Leu	Ser 415	Arg
Tyr Glu Gl	•								
<210> 31 <211> 419 <212> PRT <213> Homo	sapiens								

<220>

<221> MISC FEATURE

<222> (346)..(346)

<223> Applicants disclose Pro and Leu variants at this position

<400> 31

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1. 5 10 15

Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys
20 25 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 35 40 45

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro
115 120 125

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser 130 135 140

Leu Thr Glu Ile Leu Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln 145 150 155 160

Leu Cys Tyr Gln Asp Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn 165 170 175

Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys 180 185 190

His Pro Cys Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser 195 200 205

Ser	Glu Asp	Cys	Gln	Ser	Leu	Thr	Arg	Thr	Val	Cys	Ala	Gly	Gly	Cys
	210	_			215		_			220		_	_	_

Ala	Arg	Cys	Lys	Gly	Pro	Leu	Pro	Thr	Asp	Cys	Cys	His	Glu	Gln	Cys
225					230					235					240

Ala Ala Gly Cys Thr Gly Pro Lys His Ser Asp Cys Leu Ala Cys Leu
$$245$$
 250 255

His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala Leu Val 260 265 270

Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro Glu Gly Arg 275 280 285

Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu 290 295 300

Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln 305 310 315 320

Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys 325 330 335

Pro Cys Ala Arg Gly Thr His Ser Leu Xaa Pro Arg Pro Ala Ala Val 340 345 350

Pro Val Pro Leu Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser 355 360 365

Phe Leu Arg Pro Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro 370 375 380

Leu Ala Pro Leu Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val 385 390 395 400

Gly Arg Gly Pro Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg 405 410 415

Tyr Glu Gly

<210> 32

<211> 419

<212> PRT

<213> Homo sapiens

<220>

<221> MISC_FEATURE

<222> (356)...(356)

<223> Applicants disclose Leu and Gln variants at this position

<400> 32

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1 5 10 15

Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys
20 25 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 35 40 45

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 55 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro 115 120 125

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser 130 135 140

Leu Thr Glu Ile Leu Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln 145 150 155 160

Leu Cys Tyr Gln Asp Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn 165 170 175

Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys 180 185 190

His Pro Cys Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser Page 31

195 200 20

Ser Glu Asp 210	Cys Gln	Ser Leu 215		g Thr '	Val Cys 220	Ala G	ly Gly	Cys
Ala Arg Cys 225	Lys Gly	Pro Leu 230	Pro Th		Cys Cys 235	His G	lu Gln	Cys 240
Ala Ala Gly	Cys Thr 245	Gly Pro	Lys Hi	s Ser 7 250	Asp Cys	Leu A	la Cys 255	Leu
His Phe Asr	His Ser 260	Gly Ile	Cys Gl 26		His Cys		la Leu 70	Val
Thr Tyr Asr 275	_	Thr Phe	Glu Se 280	r Met :	Pro Asn	Pro G: 285	lu Gly	Arg
Tyr Thr Phe	Gly Ala	Ser Cys 295	Val Th	r Ala (Cys Pro 300	Tyr A	sn Tyr	Leu
Ser Thr Asp 305	Val Gly	Ser Cys 310	Thr Le		Cys Pro 315	Leu H	is Asn	Gln 320
Glu Val Thi	Ala Glu 325	Asp Gly	Thr Gl	n Arg (330	Cys Glu	Lys C	ys Ser 335	Lys
Pro Cys Ala	Arg Gly 340	Thr His	Ser Le 34		Pro Arg		la Ala 50	Val
Pro Val Pro		Met Gln	Pro Gl 360	y Pro I	Ala His	Pro Va 365	al Leu	Ser
Phe Leu Aro	Pro Ser	Trp Asp 375	Leu Va	l Ser i	Ala Phe 380	Tyr S	er Leu	Pro
Leu Ala Pro 385	Leu Ser	Pro Thr 390	Ser Va		Ile Ser 395	Pro V	al Ser	Val 400
Gly Arg Gly	Pro Asp 405	Pro Asp	Ala Hi	s Val 7 410	Ala Val	Asp L	eu Ser 415	Arg

Tyr Glu Gly

<210> 33 <211> 419 <212> PRT <220> <222> <400> 33 35

<213> Homo sapiens

<221> MISC FEATURE

(358)..(358)

<223> Applicants disclose Met and Leu variants at this position

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Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys 20 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 40

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 55 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro 115 120

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser 130 135

Leu Thr Glu Ile Leu Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln 160 145 150

Leu Cys Tyr Gln Asp Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn 165 170 175

Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys 180 185 190

His	Pro	Cys 195	Ser	Pro	Met	Cys	Lys 200	Gly	Ser	Arg	Cys	Trp 205	Gly	Glu	Ser
Ser	Glu 210	Asp	Cys	Gln	Ser	Leu 215	Thr	Arg	Thr	Val	Cys 220	Ala	Gly	Gly	Cys
Ala 225	Arg	Cys	Lys	Gly	Pro 230	Leu	Pro	Thr	Asp	Cys 235	Cys	His	Glu	Gln	Cys 240
Ala	Ala	Gly	Cys	Thr 245	Gly	Pro	Lys	His	Ser 250	Asp	Cys	Leu	Ala	Cys 255	Leu
His	Phe	Asn	His 260	Ser	Gly	Ile	Cys	Glu 265	Leu	His	Cys	Pro	Ala 270	Leu	Val
Thr	Tyr	Asn 275	Thr	Asp	Thr	Phe	Glu 280	Ser	Met	Pro	Asn	Pro 285	Glu	Gly	Arg
Tyr	Thr 290	Phe	Gly	Ala	Ser	Cys 295	Val	Thr	Ala	Cys	Pro 300	Tyr	Asn	Tyr	Leu
Ser 305	Thr	Asp	Val	Gly	Ser 310	Cys	Thr	Leu	Val	Cys 315	Pro	Leu	His	Asn	Gln 320
Glu	Val	Thr	Ala	Glu 325	Asp	Gly	Thr	Gln	Arg 330	Cys	Glu	Lys	Cys	Ser 335	Lys
Pro	Cys	Ala	Arg 340	Gly	Thr	His	Ser	Leu 345	Pro	Pro	Arg	Pro	Ala 350	Ala	Val
Pro	Val ^	Pro 355	Leu	Arg	Xaa	Gln	Pro 360	Gly	Pro	Ala	His	Pro 365	Val	Leu	Ser
Phe	Leu 370	Arg	Pro	Ser	Trp	Asp 375	Leu	Val	Ser	Ala	Phe 380	Tyr	Ser	Leu	Pro
Leu 385	Ala	Pro	Leu	Ser	Pro 390	Thr	Ser	Val	Pro	Ile 395	Ser	Pro	Val	Ser	Val 400
Gly	Arg	Gly	Pro	Asp 405	Pro	Asp	Ala	His	Val 410	Ala	Val	Asp	Leu	Ser 415	Arg
Tyr	Glu	Gly													

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Pro	Pro	Gly	Ala 20	Ala	Ser	Thr	Gln	Val 25	Cys	Thr	Gly	Thr	Asp 30	Met	Lys
Leu	Arg	Leu 35	Pro	Ala	Ser	Pro	Glu 40	Thr	His	Leu	Asp	Met 45	Leu	Arg	His
Leu	Tyr 50	Gln	Gly	Cys	Gln	Val 55	Val	Gln	Gly	Asn	Leu 60	Glu	Leu	Thr	Tyr
Leu 65	Pro	Thr	Asn	Ala	Ser 70	Leu	Ser	Phe	Leu	Gln. 75	Asp	Ile	Gln	Glu	Val 80
Gln	Gly	Tyr	Val	Leu 85	Ile	Ala	His	Asn	Gln 90	Val	Arg	Gln	Val	Pro 95	Leu
Gln	Arg	Leu	Arg 100	Ile	Val	Arg	Gly	Thr 105	Gln	·Leụ	Phe	Glu	Asp 110	Asn	Tyr
Ala	Leu	Ala 115	Val	Leu	Asp	Asn	Gly 120	Asp	Pro	Leu	Asn	Asn 125	Thr	Thr	Pro
Val	Thr 130	Gly	Ala	Ser	Pro	Gly 135	Gly	Leu	Arg	Glu	Leu 140	Gln	Leu	Arg	Ser
Leu 145	Thr	Glu	Ile	Leu	Lys 150	Gly	Gly	Val	Leu	Ile 155	Gln	Arg	Asn	Pro	Gln 160
Leu	Cys	Tyr	Gln	Asp 165	Thr	Ile	Leu	Trp	170	Asp age		Phe	His	Lys 175	Asn

Asn	Gln	Leu	Ala 180	Leu	Thr	Leu	Ile	Asp 185	Thr	Asn	Arg	Ser	Arg 190	Ala	Cys
His	Pro	Cys 195	Ser	Pro	Met	Cys	Lys 200	Gly	Ser	Arg	Cys	Trp 205	Gly	Glu	Ser
Ser	Glu 210	Asp	Cys	Gln	Ser	Leu 215	Thr	Arg	Thr	Val	Cys 220	Ala	Gly	Gly	Cys
Ala 225	Arg	Cys	Lys	Gly	Pro 230	Leu	Pro	Thr	Asp	Cys 235	Cys	His	Glu	Gln	Cys 240
Ala	Ala	Gly	Cys	Thr 245	Gly	Pro	Lys	His	Ser 250	Asp	Cys	Leu	Ala	Cys 255	Leu
His	Phe °	Asn	His 260	Ser	Gly	Ile	Cys	Glu 265	Leu	His	Cys	Pro	Ala 270	Leu	Val
Thr	Tyr	Asn 275	Thr	Asp	Thr	Phe	Glu 280	Ser	Met	Pro	Asn	Pro 285	Glu	Gly	Arg
Tyr	Thr 290	Phe	Gly	Ala	Ser	Cys 295	Val	Thr	Ala	Cys	Pro 300	Tyr	Asn	Tyr	Leu
Ser 305	Thr	Asp	Val	Gly	Ser 310	Cys	Thr	Leu	Val	Cys 315	Pro	Leu	His	Asn	Gln 320
Glu	Val	Thr	Ala	Glu 325	Asp	Gly	Thr	Gln	Arg 330	Cys	Glu	Lys	Cys	Ser 335	Lys
Pro	Cys	Ala	Arg 340	Gly	Thr	His	Ser	Leu 345	Pro	Pro	Arg	Pro	Ala 350	Ala	Val
Pro	Val	Pro 355	Leu	Arg	Met	Gln	Pro 360	Xaa	Pro	Ala	His	Pro 365	Val	Leu	Ser
Phe	Leu 370	Arg	Pro	Ser	Trp	Asp 375	Leu	Val	Ser	Ala	Phe 380	Tyr	Ser	Leu	Pro
Leu 385	Ala	Pro	Leu	Ser	Pro 390	Thr	Ser	Val	Pro	Ile 395	Ser	Pro	Val	Ser	Val 400
Gly	Arg	Gly	Pro	Asp	Pro	Asp	Ala	His		Ala age		Asp	Leu	Ser	Arg

Tyr Glu Gly

<210> 35

<211> 419

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (376)..(376)

<223> Applicant disclose Leu and Ile variants at this position

<400> 35

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1 5 10 15

Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys 20 25 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 35 40 45

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 55 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu . 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro 115 120 125

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser 130 135 140

Leu Thr Glu Ile Leu Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln 145 150 155 . 160

Leu	Cys	Tyr	Gln	Asp 165	Thr	Ile	Leu	Trp	Lys 170	Asp	Ile	Phe	His	Lys 175	Asn
Asn	Gln	Leu	Ala 180	Leu	Thr	Leu	Ile	Asp 185	Thr	Asn	Arg	Ser	Arg 190	Ala	Cys
His	Pro	Cys 195	Ser	Pro	Met	Cys	Lys 200	Gly	Ser	Arg	Cys	Trp 205	Gly	Glu	Ser
Ser	Glu 210	Asp	Cys	Gln	Ser	Leu 215	Thr	Arg	Thr	Val	Cys 220	Ala	Gly	Gly	Cys
Ala 225	Arg	Cys	Lys	Gly	Pro 230	Leu	Pro	Thr	Asp	Cys 235	Cys	His	Glu	Gln	Cys 240
Ala	Ala	Gly	Cys	Thr 245	Gly	Pro	Lys	His	Ser 250	Asp	Cys	Leu	Ala	Cys 255	Leu
His	Phe	Asn	His 260	Ser	Gly	Ile	Cys	Glu 265	Leu	His	Cys	Pro	Ala 270	Leu	Val
Thr	Tyr	Asn 275	Thr	Asp	Thr	Phe	Glu 280	Ser	Met	Pro	Asn	Pro 285	Glu	Gly	Arg
Tyr	Thr 290	Phe	Gly	Ala	Ser	Cys 295	Val	Thr	Ala	Cys	Pro 300	Tyr	Asn	Tyr	Leu
Ser 305	Thr	Asp	Val	Gly	Ser 310	Cys	Thr	Leu	Val	Cys 315	Pro	Leu	His	Asn	Gln 320
Glu	Val	Thr	Ala	Glu 325	Asp	Gly	Thr	Gln	Arg 330	Cys	Glu	Lys	Cys	Ser 335	Lys
Pro	Cys	Ala	Arg 340	Gly	Thr	His	Ser	Leu 345	Pro	Pro	Arg	Pro	Ala 350	Ala	Val
Pro	Val	Pro 355	Leu	Arg	Met	Gln	Pro 360	Gly	Pro	Ala	His	Pro 365	Val	Leu	Ser
Phe	Leu 370	Arg	Pro	Ser	Trp	Asp 375	Xaa	Val	Ser	Ala	Phe 380	Tyr	Ser	Leu	Pro
Leu 385	Ala	Pro	Leu	Ser	Pro 390	Thr	Ser	Val		Ile 395 age	Ser 38	Pro	Val	Ser	Val 400

Gly Arg Gly Pro Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg 405 410 415

Tyr Glu Gly

<210> 36

<211> 419

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (394)..(394)

<223> Applicants disclose Pro and Arg variants at this position

<400> 36

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1 5 10 15

Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys
20 25 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 35 40 45

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 55 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro
115 120 125

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser 130 135 140

Leu	Thr	Glu	Ile	Leu	Lys	Gly	Gly	Val	Leu	Ile	Gln	Arg	Asn	Pro	Gln
145					150	_	_			155					160

Leu Cys Tyr Gln Asp Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn 165 170 175

Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys 180 185 190

His Pro Cys Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser 195 200 205

Ser Glu Asp Cys Gln Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys 210 220

Ala Arg Cys Lys Gly Pro Leu Pro Thr Asp Cys Cys His Glu Gln Cys 225 230 235 240

Ala Ala Gly Cys Thr Gly Pro Lys His Ser Asp Cys Leu Ala Cys Leu 245 250 255

His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala Leu Val 260 265 270

Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro Glu Gly Arg 275 280 285

Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu 290 295 300

Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln 305 310 315 320

Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys 325 330 335

Pro Cys Ala Arg Gly Thr His Ser Leu Pro Pro Arg Pro Ala Ala Val 340 345 350

Pro Val Pro Leu Arg Met Gln Pro Gly Pro Ala His Pro Val Leu Ser 355 360 365

Phe Leu Arg Pro Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro 370 375 380

Leu Ala Pro Leu Ser Pro Thr Ser Val Xaa Ile Ser Pro Val Ser Val 385 390 395 400

Gly Arg Gly Pro Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg 405 410 415

Tyr Glu Gly

<210> 37

<211> 419

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

 $\langle 222 \rangle$ (404)...(404)

<223> Applicants disclose Pro and Leu variants at this position

<400> 37

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1 5 10 15

Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys
20 25 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 35 40 45

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 55 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro 115 120 125

Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser Page 41

130 135 140

Leu 145	Thr	Glu	Ile	Leu	Lys 150	Gly	Gly	Val	Leu	Ile 155	Gln	Arg	Asn	Pro	Gln 160
Leu	Cys	Tyr	Gln	Asp 165	Thr	Ile	Leu	Trp	Lys 170	Asp	Ile	Phe	His	Lys 175	Asn
Asn	Gln	Leu	Ala 180	Leu	Thr	Leu	Ile	Asp 185	Thr	Asn	Arg	Ser	Arg 190	Ala	Cys
His	Pro	Cys 195	Ser	Pro	Met	Cys	Lys 200	Gly	Ser	Arg	Cys	Trp 205	Gly	Glu	Ser
Ser	Glu 210	Asp	Cys	Gln	Ser	Leu 215		Arg	Thr	Val	Cys 220	Ala	Gly	Gly	Cys
Ala 225	Arg	Cys	Lys	Gly	Pro 230	Leu	Pro	Thr	Asp	Cys 235	Cys	His	Glu	Gln	Cys 240
Ala	Ala	Gly	Cys	Thr 245	Gly	Pro	Lys	His	Ser 250	Asp	Cys	Leu	Ala	Cys 255	Leu
His	Phe	Asn	His 260	Ser	Gly	Ile	Cys	Glu 265	Leu	His	Cys	Pro	Ala 270	Leu	Val
Thr	Tyr	Asn 275	Thr	Asp	Thr	Phe	Glu 280	Ser	Met	Pro	Asn	Pro 285	Glu	Gly	Arg
Tyr	Thr 290	Phe	Gly	Ala	Ser	Cys 295	Val	Thr	Ala	Cys	Pro 300	Tyr	Asn	Tyr	Leu
Ser 305	Thr	Asp	Val	Gly	Ser 310	Cys	Thr	Leu	Val	Cys 315	Pro	Leu	His	Asn	Gln 320
Glu	Val	Thr	Ala	Glu 325	Asp	Gly	Thr	Gln	Arg 330	Суѕ	Glu	Lys	Cys	Ser 335	Lys
Pro	Cys	Ala	Arg 340	Gly	Thr	His	Ser	Leu 345	Pro	Pro	Arg	Pro	Ala 350	Ala	Val
Pro	Val	Pro 355	Leu	Arg	Met	Gln	Pro 360	Gly	Pro	Ala	His	Pro 365	Val	Leu	Ser

Phe Leu Arg Pro Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro 370 380

Leu Ala Pro Leu Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val 385 390 395 400

Gly Arg Gly Xaa Asp Pro Asp Ala His Val Ala Val Asp Leu Ser Arg 405 410 415

Tyr Glu Gly

<210> 38

<211> 419

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (413)..(413)

<223> Applicants disclouse Asp and Asn variants at this position

<400> 38

Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu 1 5 10 15

Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys 20 25 30

Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His 35 40 45

Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr 50 55 60

Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val 65 70 75 80

Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu 85 90 95

Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr 100 105 110

Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro 115 120 125

Page 43

Val	Thr 130	Gly	Ala	Ser	Pro	Gly 135	Gly	Leu	Arg	Glu	Leu 140	Gln	Leu	Arg	Ser
Leu 145	Thr	Glu	Ile	Leu	Lys 150	Gly	Gly	Val	Leu	Ile 155	Gln	Arg	Asn	Pro	Gln 160
Leu	Cys	Tyr	Gln	Asp 165	Thr	Ile	Leu	Trp	Lys 170	Asp	Ile	Phe	His	Lys 175	Asn
Asn	Gln	Leu	Ala 180	Leu	Thr	Leu	Ile	Asp 185	Thr	Asn	Arg	Ser	Arg 190	Ala	Cys
His	Pro	Cys 195	Ser	Pro	Met	Cys	Lys 200	Gly	Ser	Arg	Cys	Trp 205	Gly	Glu	Ser
Ser	Glu 210	Asp	Cys	Gln	Ser	Leu 215	Thr	Arg	Thr	Val	Cys 220	Ala	Gly	Gly	Cys
Ala 225	Arg	Cys	Lys	Gly	Pro 230	Leu	Pro	Thr	Asp	Cys 235	Cys	His	Glu	Gln	Cys 240
Ala	Ala	Gly	Cys	Thr 245	Gly	Pro	Lys	His	Ser 250	Asp	Cys	Leu	Ala	Cys 255	Leu
His	Phe	Asn	His 260	Ser	Gly	Ile	Cys	Glu 265	Leu	His	Cys	Pro	Ala 270	Leu	Val
Thr	Tyr	Asn 275	Thr	Asp	Thr	Phe	Glu 280	Ser	Met	Pro	Asn	Pro 285	Glu	Gly	Arg
Tyr	Thr 290	Phe	Gly	Ala	Ser	Cys 295			Ala	_	Pro 300		Asn	Tyr	Leu
Ser 305	Thr	Asp	Val	Gly	Ser 310	Cys	Thr	Leu	Val	Cys 315	Pro	Leu	His	Asn	Gln 320
Glu	Val	Thr	Ala	Glu 325	Asp	Gly	Thr	Gln	Arg 330	Cys	Glu	Lys	Cys	Ser 335	Lys
Pro	Cys	Ala	Arg 340	Gly	Thr	His	Ser	Leu 345	Pro	Pro	Arg	Pro	Ala 350	Ala	Val
Pro	Val	Pro	Leu	Arg	Met	Gln	Pro	Gly		Ala age		Pro	Val	Leu	Ser

355 360

Phe Leu Arg Pro Ser Trp Asp Leu Val Ser Ala Phe Tyr Ser Leu Pro 370 375 380

Leu Ala Pro Leu Ser Pro Thr Ser Val Pro Ile Ser Pro Val Ser Val 385 390 395 400

Gly Arg Gly Pro Asp Pro Asp Ala His Val Ala Val Xaa Leu Ser Arg 405 410 415

Tyr Glu Gly